

CLAIMS

What is claimed is:

1. A method of tracking reallocated object data when the object is moved for memory reclamation, comprising:
 - asserting the status signal to indicate that reclaim has begun on a memory block;
 - storing a physical address of a source memory location from where the object is being moved;
 - storing a physical address of a destination memory location;
 - modifying the object data; and
 - moving the modified object data to the destination memory location.
2. The method of claim 1, further comprising setting the status signal to indicate the object data modification is complete.
3. The method of claim 1, wherein the object is stored in flash memory.
4. The method of claim 3, wherein the flash memory is a flash electrically erasable read only memory (EEPROM) array.
5. The method of claim 1, wherein the status signal is a four (4) bit signal.
6. The method of claim 1, wherein the object data is an application program file.
7. The method of claim 6, wherein the application program file is a K-Java file.

8. An article comprising a machine readable medium having a plurality of machine readable instructions, wherein when the instructions are executed by a processor, the instructions cause a system to:

assert the status signal to indicate that reclaim has begun on a memory block;

store a physical address of a source memory location from where the object is being moved;

store a physical address of a destination memory location;

modify the object data; and

move the modified object data to the destination memory location.

9. The article of claim 8 comprising a machine readable medium having a plurality of machine readable instructions, wherein when the instructions are executed by a processor, the instructions further cause a system to:

set the status signal to indicate the object data modification is complete.

10. A method of modifying an object after a reclaim process, comprising:
reading an object to be updated into a random access memory (RAM) location;

reading an input argument object size;

signaling an application for modification;

storing the delta value by which the pointers within the object need to be incremented; and

modifying the object data if modification needs to be done.

11. The method of claim 10, wherein the objects are read to be updated from the destination address.

12. The method of claim 11, wherein the object is updated in the destination address with the data passed into the allocated RAM space.

13. The method of claim 10, wherein the application calls a function to modify the data during reclamation.

14. The method of claim 13, wherein the function returns a Boolean value to indicate that the object modification is not necessary if the application does not need to modify the data object.

15. The method of claim 10, wherein the function allocates the RAM space required to modify the data.

16. The method of claim 15, wherein the function allocates the RAM space specified by the input argument object size.

17. The method of claim 10, wherein the modification to the object data is based on the delta value by which the pointers within the object need to be incremented.

18. An apparatus, comprising:

a unique identifier to validate object data in the apparatus;

a plurality of size fields to indicate the size of each object to be moved during reclaim;

a plurality of status fields to indicate the status of each object;

a source address field to track the memory location from where the object is to be moved; and

a destination address field to track the memory location to where the object is to be moved.

19. The apparatus in claim 18, wherein the apparatus is a paragraph object.

20. The apparatus of claim 18, wherein the apparatus can store an unlimited number of object data.

21. The apparatus of claim 20, wherein each object data has a corresponding status field and size field.

22. A method of reclaiming a flash memory block, comprising:

setting a flag to prevent a file interpreter from reclaiming another memory block at the same time;

requesting permission from the file interpreter to do a reclaim on the memory block ;

moving valid data to a spare memory block;

compressing the valid data;

erasing the memory block; and

copying valid data back into the memory block from the spare memory block.

23. The method of claim 22, further comprising:

clearing the flag to indicate reclaim completed.